Crestron **SWE-8**
Sonnex™ Multiroom Audio Expansion Switcher, 8 Zone
Operations Guide

CRESTRON®

This document was prepared and written by the Technical Documentation department at:

Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Disconnect power prior to connecting or disconnecting equipment.
- Do not install in direct sunlight.
- The apparatus must be installed in a way that the power cord can be removed either from the wall outlet or from the device itself in order to disconnect the mains power.
- Prevent foreign objects from entering the device.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THE APPARATUS.

WARNING:

TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER. THERE ARE NO USER SERVICEABLE PARTS INSIDE. ONLY QUALIFIED SERVICE PERSONNEL SHOULD PERFORM SERVICE.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

THIS IS AN APPARATUS WITH CLASS I CONSTRUCTION. IT SHALL BE CONNECTED TO AN ELECTRICAL OUTLET WITH AN EARTHING GROUND TERMINAL.

IMPORTANT:

The SWE-8 can be used with Class 2 output wiring.

Regulatory Compliance

As of the date of manufacture, the SWE-8 have been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.

Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:
(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada (IC) Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

The specific patents that cover Crestron products are listed at patents.crestron.com.

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Sonnex™ Multiroom Audio Expander, 8 Zone: SWE-8

Introduction

The SWE-8 is an 8-zone expansion switcher for the Sonnex™ Multiroom Audio System (SWAMP-24X8[1]) from Crestron®. It provides eight zone outputs consisting of four analog line-level and four S/PDIF digital outputs. All eight outputs also include Crestron Home® (CH) CAT5 balanced audio outputs for long-distance wiring applications. The SWE-8 is ideal for routing audio to AV receivers, powered subwoofers, headphone amplifiers, phone systems (for music-on-hold), and other audio equipment.

Features and Functions

- Eight zone Sonnex expansion with line-level outputs
- Four zones with balanced and unbalanced line outputs
- Four zones with S/PDIF digital outputs
- All eight zones include Crestron Home CAT5 balanced outputs
- All ports on an output are paralleled[2]
- Professional-quality audio performance
- Advanced DSP, mono summing, and output bussing per zone
- Single-cable interface to SWAMP-24X8 via Sonnex Link
- Plug-and-play operation
- Single-space rack mountable

8 Zones Unamplified

The SWE-8 allows routing of any of the main SWAMP-24X8's 24 source inputs to any of its eight zone outputs. Outputs 1-4 offer balanced, unbalanced, and CH outputs. Outputs 5-8 offer S/PDIF and CH outputs. All ports on each output are paralleled, allowing all the outputs to be used simultaneously.

1. Item sold separately.
2. The total load should be greater than 2k Ohms if multiple ports for the same zone are used simultaneously.

Crestron Home CAT5 Audio Distribution

The CH CAT5 balanced outputs enable long-distance wire runs up to 500 feet (152 meters) to feed remote equipment such as powered subwoofers and AV receivers located throughout the house. The CH signal is easily converted to unbalanced line-level at each remote location using an ABAR-1 CAT5 Balanced Audio Receiver[1]. CH outputs are also compatible with other Crestron Home products such as the C2N-IADS30X24, CNX-BIPAD8, CNXRMCLV, C2N-DAP8[1], and certain Crestron touch screens.

Digital Signal Processing

Each zone features independent DSP for optimal sound quality and control in every room. Sonnex DSP capabilities include the choice of graphic or parametric 5-band EQ, dynamic range control, volume, bass, treble, balance, loudness, mute, mono summing, and five selectable tone profiles. For subwoofer applications, a choice of second or fourth order active crossover filters can be set using the parametric EQ, leaving the four remaining EQ filters available for room correction and tonal enhancement.

Output Bussing

Output bussing allows multiple zones to function as one, whether fed from the SWE-8, the SWAMP-24X8, or another Sonnex Expander. Output bussing is ideal for grouping adjacent listening areas together or associating a powered subwoofer with its stereo speaker pair. Volume offset adjustments allow for balancing the levels of each bussed zone for smooth, even coverage.

Simple, Versatile Installation

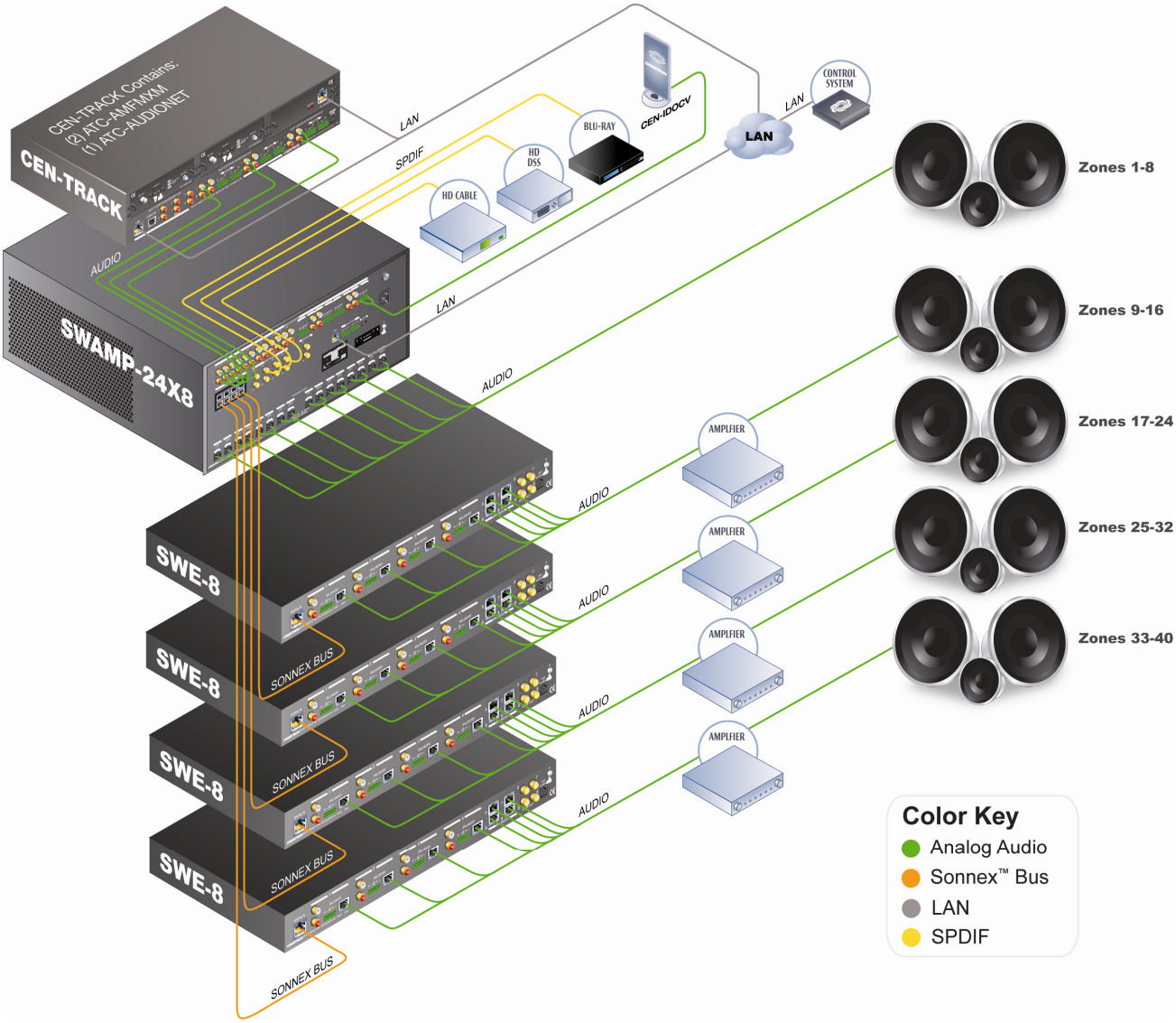
The SWE-8 can be installed along with the SWAMP-24X8 at the central equipment rack, or separately at a remote location. It interfaces with the SWAMP-24X8 via a single CAT5e shielded twisted pair (STP) cable up to 200 feet (61 meters) in length[2]. This length can be increased to 1000 feet (304 meters) using multimode fiber optic cable with the S-EXT1-S Sonnex Link over Fiber Extender[1]. Plug-and-play connectivity affords an extremely easy installation with full control access to all the SWE-8 functions provided through the SWAMP-24X8.

1. Item(s) sold separately.
2. For connection of the Sonnex Link between the SWE-8 and SWAMP-24X8, use Crestron DM-CBL-8G or high-quality CAT5e shielded twisted-pair cable. The maximum cable length is 200 feet (61 meters). For longer distances, use the S-EXT1-S.

Applications

The following diagram shows a SWE-8 in a multi-zone application.

SWE-8 in a Multi-Zone Application



Specifications

Specifications for the SWE-8 are listed in the following table.

SWE-8 Specifications

SPECIFICATION	DETAILS
Audio	
Input Signal Type	Sonnex Link
Output Signal Types	Stereo analog line (unbalanced and balanced), S/PDIF coaxial (2-channel PCM only), Crestron Home CAT5 Balanced Audio
Typical of 8 stereo zone outputs:	
Digital-to-Analog Conversion	24-bit 48 kHz
Output Resolution/Bitrate (digital outputs only)	24-bit 48 kHz
Frequency Response	20 Hz to 20 kHz, ±0.5 dB
Total Harmonic Distortion (THD) + Noise	< 0.003% S/PDIF in, < 0.005% balanced or unbalanced analog in, 20 Hz to 20 kHz
S/N Ratio	>106 dB S/PDIF in, >100 dB balanced or unbalanced analog in, A-weighted
Stereo Separation	> 100 dB
Zone Separation	> 100 dB
Zone Volume Level Control	-80.0 to +20.0 dB, adjustable from 0% to 100% plus mute
Bass Control	±12.0 dB
Treble Control	±12.0 dB
Loudness Compensation	On/Off
Dynamic Range Control	On/Off
Balance Control	Left/right adjustable
Mono Summing	Selectable
Tone Profiles	Flat, Classical, Jazz, Pop, Rock, Spoken Word
EQ Modes	5-band graphic or 5-band parametric EQ
GEQ Center Frequencies	63, 250, 1k, 4k, 16 kHz
GEQ Gain	±12.0 dB per band
PEQ Filter Types	EQ, High Pass, Low Pass, Treble Shelf, Bass Shelf, Notch
PEQ Center Frequency	10 to 20,000 Hz per band
PEQ Gain	±12.0 dB per band
PEQ Bandwidth	0.1 to 3.5 octaves per band
Bus Volume Offset	±12.0 dB per zone for output bussing
Communications	
Sonnex Link	64-channel (48 utilized) digital audio with embedded control, auto-discovery, auto-negotiating

(Continued on following page)

SWE-8 Specifications (Continued)

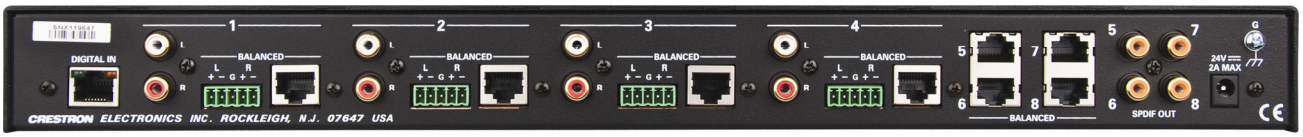
SPECIFICATION	DETAILS
Power Requirements	
Power Pack	2 Amps @ 24 Volts DC 100-240 Volts AC, 50/60 Hz; power pack included
Environmental	
Temperature	41º to 104º F (5º to 40º C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	41 BTU/Hr
Enclosure	
Chassis	Metal with black finish, vented sides
Front Panel	Metal with black finish and polycarbonate label overlay
Mounting	Freestanding or 1U 19-inch rack-mountable (feet and rack ears included)
Dimensions	
Height	1.72 in (44 mm) without feet
Width	19.00 in (483 mm) with ears 17.30 in (440 mm) without ears
Depth	10.19 in (259 mm)
Weight	5.0 lbs (2.3 kg)
Included Accessory	24 VDC, 2A regulated universal power pack
Available Accessories	
ABAR-1	Crestron Home CAT5 Balanced Audio Receiver
DM-CBL-8G	High Performance CAT5e Shielded Twisted Pair Cable
DM-8G-CONN-100	Cable Connector for DM-CBL-8G, 100-Pack
DM-8G-CRIMP	Crimping Tool for DM-8G-CONN
S-EXT1-S	Sonnex Link Over Fiber Extender
SWAMP(I)-24X8	Sonnex Multiroom Audio System

Physical Description

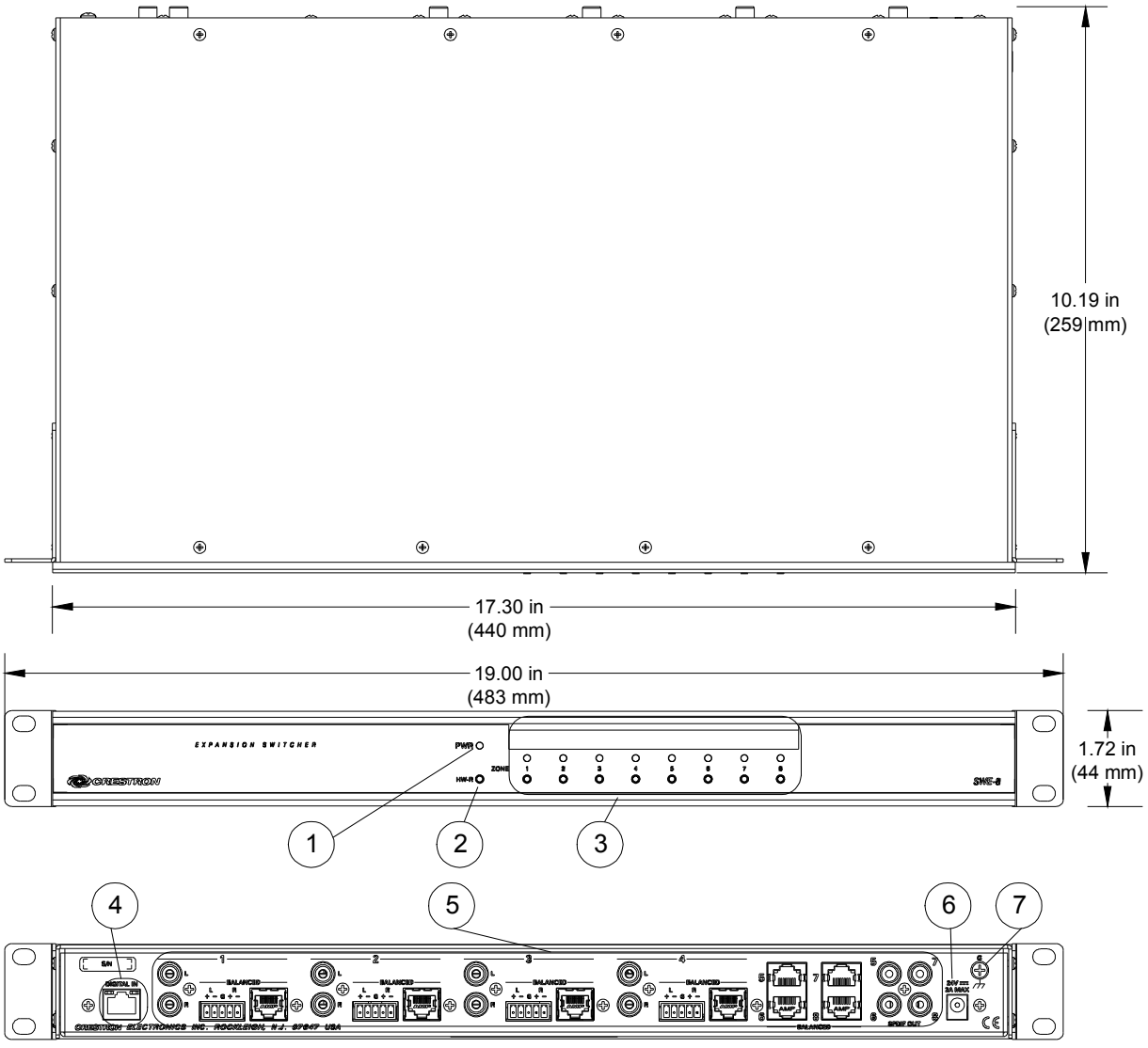
This section provides information on the connections, controls and indicators available on your SWE-8.

SWE-8 Physical View (Front)

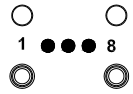
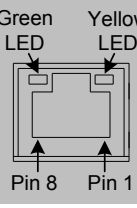
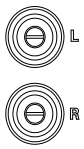
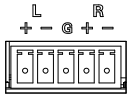
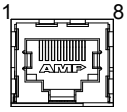
SWE-8 Physical View (Rear)



SWE-8 Overall Dimensions



Connectors, Controls & Indicators

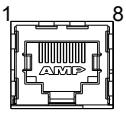
#	CONNECTORS[1], CONTROLS & INDICATORS	DESCRIPTION
1	PWR LED	(1) Green LED indicates operating power supplied via power pack
2	HW-R	(1) Recessed push button for hardware reset
3	ZONE (1-8) (Buttons and LEDs) 	(8) Push buttons and green LEDs, select output zone for routing and adjustment
4	DIGITAL IN[2] 	(1) 8-wire RJ-45 female (8P8C modular jack); Sonnex link input; Connect to SWAMP-24X8 Multiroom Audio System[3] or S-EXT1-S Sonnex Link Over Fiber Extender[3] (each sold separately) Green LED indicates link status; Amber LED indicates data communication
5	AUDIO OUTPUTS[4]	(8) Audio outputs consisting of one or more of the following connectors:
		L/R Unbalanced (Outputs 1-4) (1) Pair RCA female, unbalanced stereo line-level audio output Output impedance: 100 Ohms Maximum output level: 2 V_{rms}
		Balanced L/R (Outputs 1-4) (1) 5-pin 3.5 mm detachable terminal block, balanced stereo line-level audio output Output impedance: 200 Ohms balanced, 100 Ohms unbalanced; Maximum output level: 4 V_{rms} balanced, 2 V_{rms} unbalanced
		Balanced (CH) (Outputs 1-8)[5] (1) 8-wire RJ-45 female, shielded “Crestron Home” CAT5 balanced stereo audio output port. Connect to any “CH” CAT5 audio input port or bidirectional audio port[2, 5] Maximum cable length: 500 feet (152 meters) per port Output impedance: 200 Ohms balanced
		SPDIF OUT (Outputs 5-8) (1) S/PDIF coaxial digital audio output Output level: 0.5 V_{rms} nominal Output impedance: 75 Ohms

(Continued on following page)

Connectors, Controls & Indicators (Continued)

#	CONNECTORS[1], CONTROLS & INDICATORS	DESCRIPTION
6	24 VDC 2.0A	(1) 2.1 mm barrel DC power jack; 24 Volt DC power input (power pack included)
7	GROUND	(1) 6-32 screw, chassis ground lug

1. Interface connectors for **SPEAKER OUTPUTS** ports are provided with the unit.
2. To determine which is pin 1 on the cable, hold the cable so the end of the eight pin modular plug is facing away from you, with the clip down and copper side up. Pin 1 is on the far left.
3. For connection of the Sonnex Link between the SWE-8 and the SWAMP-24X8 or S-EXT1-S, use Crestron DM-CBL-8G or high-quality CAT5e shielded twisted-pair cable. The maximum cable length is 200 ft (61 meters) per run. For longer distances, use the S-EXT1-S.
4. All analog outputs are paralleled per zone.
5. This eight-pin RJ-45 port uses CAT5 wiring to provide connectivity to the ABAR-1 CAT5 Balanced Audio Receiver and other Crestron Home products such as the C2N-IADS30X24, CNX-BIPAD8, CNXRMCLV, C2N-DAP8, and certain Crestron touch screens. Refer to the following table for connector pinouts.



PIN	WIRE COLORS (568B)	AUDIO I/O
1	WHITE/ORANGE	+ Left Out
2	ORANGE	- Left Out
3	WHITE/GREEN	+ Right Out
4	BLUE	N/A
5	WHITE/BLUE	N/A
6	GREEN	- Right Out
7	WHITE/BROWN	N/A
8	BROWN	N/A

Setup

Sonnex Link Wiring

Crestron recommends using Crestron DM-CBL-8G (sold separately) or high-quality CAT5e shielded twisted-pair cable for Sonnex Link connections between the SWE-8 and the SWAMP-24X8 or S-EXT1-S.

NOTE: Shielded connectors such as the DM-8G-CONN (sold separately) must be used.

DM-CBL-8G wire can carry Sonnex Link signals up to 200 feet (61 meters).

Installation

Ventilation

The SWE-8 should be used in a well-ventilated area. The venting holes should not be obstructed under any circumstances.

To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications. Consider using forced air ventilation and/or incrementing the spacing between units to reduce overheating. Consideration must be given if installed in a closed or multi-unit rack assembly since the operating ambient temperature of the environment may be greater than the room ambient temperature. Contact with thermal insulating materials should be avoided on all sides of the unit.

Rack Mounting

The SWE-8 can be mounted in a rack or stacked with other equipment. Two "ears" are provided with the SWE-8 so that the unit can be rack mounted. These ears must be installed prior to mounting. Complete the following procedure to attach the ears to the unit. The only tool required is a #1 or #2 Phillips screwdriver.

WARNING: To prevent bodily injury when mounting or servicing this unit in a rack, take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

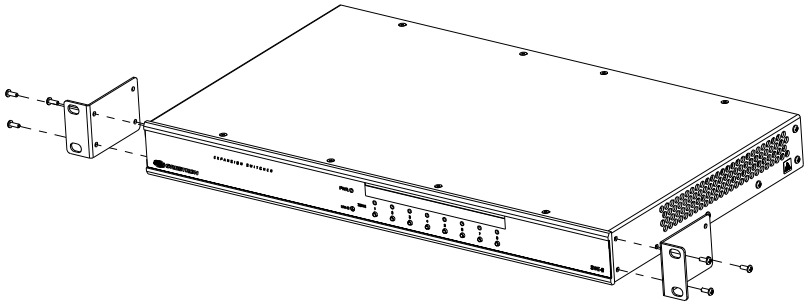
NOTE: Four "feet" are provided with the SWE-8 so that if the unit is not rack mounted, the rubber feet can provide stability when the unit is placed on a flat surface or stacked. These feet should be attached prior to the hookup procedure.

NOTE: Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

To install the ears:

1. There are screws that secure each side of the SWE-8 top cover. Using a #1 or #2 Phillips screwdriver, remove the three screws closest to the front panel from one side of the unit. Refer to the diagram following step 3 for a detailed view.
2. Position a rack ear so that its mounting holes align with the holes vacated by the screws in step 2.
3. Secure the ear to the unit with the three screws from step 2 as shown in the following diagram.

Ear Attachment for Rack Mounting



4. Repeat procedure (steps 1 through 3) to attach the remaining ear to the opposite side.

Stacking

Four "feet" are provided with the SWE-8 so that if the unit is not rack mounted, the rubber feet can provide stability when the unit is placed on a flat surface or stacked.

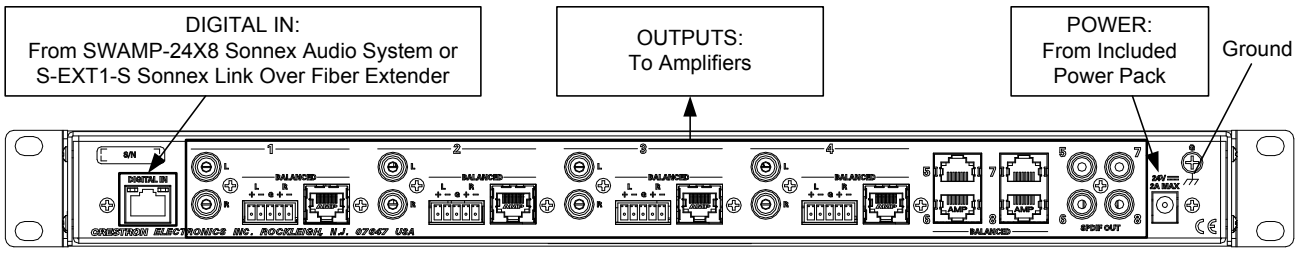
NOTE: No more than two SWE-8 units should be stacked.

Hardware Hookup

Connect the Device

Make the necessary connections as called out in the illustration that follows this paragraph. Refer to "Sonnex Link Wiring" on page 9 for additional information. Apply power after all connections have been made.

Hardware Connections for the SWE-8



CAUTION: Keep the device unplugged until the output wiring is complete.

NOTE: Ensure the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).

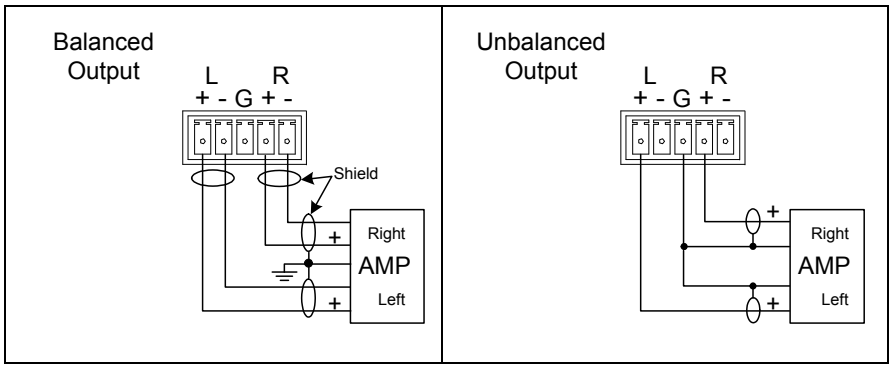
NOTE: To prevent overheating, do not operate this product in an area that exceeds the environmental temperature range listed in the table of specifications.

Four balanced/unbalanced audio outputs are provided, utilizing 5-pin terminal block connectors. For connection details, refer to the following table and diagrams.

Audio Connections

SIGNAL NAME	BALANCED AUDIO OUTPUT	UNBALANCED AUDIO OUTPUT
+	L +	L + Out
-	L -	Open
G	Shield/ground	Common ground
+	R +	R + Out
-	R -	Open

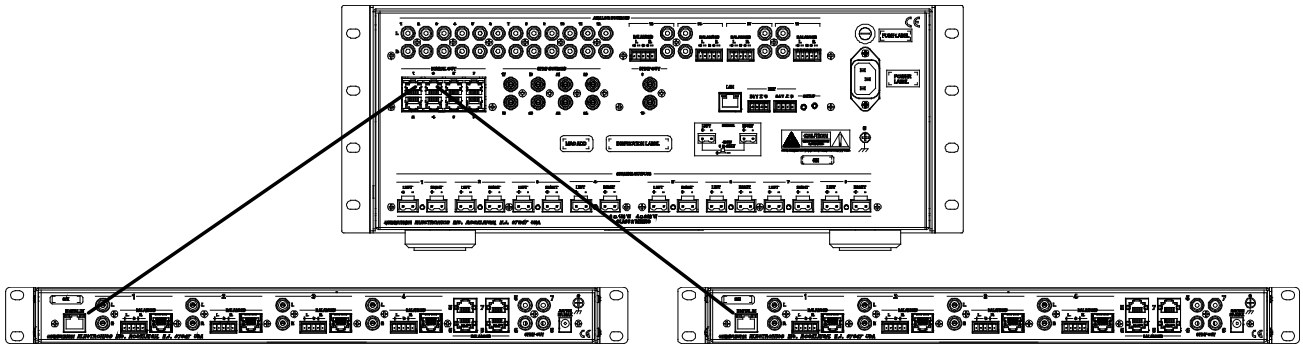
Typical Balanced/Unbalanced Outputs



Connect to SWAMP24X8 or S-EXT1-S Sonnex Link Over Fiber Extender

The SWE-8 can be connected to a SWAMP-24X8 or S-EXT1-S Sonnex Link Over Fiber Extender via shielded CAT5 cable.

SWAMP-24X8 to SWE-8 Connection



NOTE: When the SWAMP-24X8 is connected to a control system using Cresnet®, only one SWE-8 can be connected.

NOTE: When connecting a SWAMP-24X8 or S-EXT1-S to a SWE-8, Crestron recommends using Crestron DM-CBL-8G or high-quality CAT5e shielded twisted-pair cable. Shielded connectors such as the DM-8G-CONN (sold separately) must be used.

NOTE: The maximum cable length between a SWAMP-24X8 or S-EXT1-S and SWE-8 is 200 feet (61 meters).

Label the Buttons

Use Crestron Engraver software to print custom labels for the SWE-8's front panel buttons and LEDs. Crestron recommends printing on 100-pound paper. Paper weighing less than 100 pounds tends to crumple while sliding in, while paper weighing more than 100 pounds may not fit.

Configuration

The SWE-8 is automatically configured from the front panel of a connected SWAMP-24X8 or by Sonnex Tools software. For more information on configuration options, refer to the latest version of the SWAMP(I)-24X8 Sonnex Multiroom Audio System Operations Guide (Doc. 7049) which is available from the Crestron Web site (www.crestron.com/manuals).

Programming Software

Have a question or comment about Crestron software?

Answers to frequently asked questions (FAQs) can be viewed in the Online Help section of the Crestron Web site. To post a question or view questions you have submitted to Crestron's True Blue Support, log in at www.crestron.com/support. First-time users must establish a user account.

Earliest Version Software Requirements for the PC

NOTE: Crestron recommends that you use the latest software to take advantage of the most recently released features. The latest software is available from the Crestron Web site (www.crestron.com/software).

Crestron has developed an assortment of Windows®-based software tools to develop a customized system. Use SystemBuilder™ or SIMPL Windows to create a program to control the SWE-8.

Programming with SystemBuilder

SystemBuilder is a comprehensive programming environment. Appropriate for most systems, it can quickly and easily generate a complete working program including both control processor logic and touch screen graphics.

Programming with SIMPL Windows

NOTE: While SIMPL Windows can be used to program the SWE-8, it is recommended to use SystemBuilder for configuring a system.

SIMPL Windows is Crestron's premier software for programming Crestron control systems. It is organized into two separate but equally important "Managers": Configuration and Program.

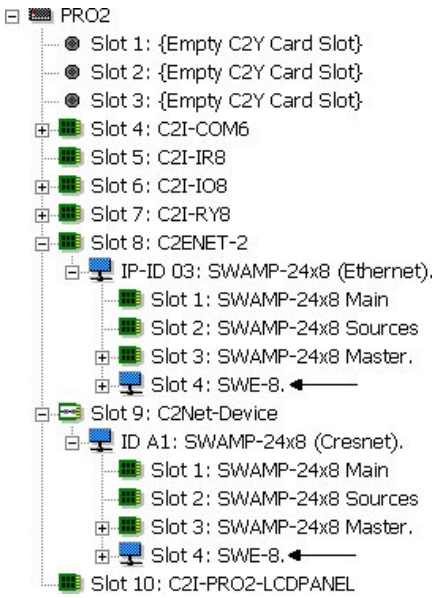
Configuration Manager

Configuration Manager is the view where programmers "build" a Crestron control system by selecting hardware from the *Device Library*.

1. The SWAMP-24X8 must first be incorporated into the system. For instructions, refer to the latest version of the SWAMP(I)-24X8 Sonnex Multiroom Audio System Operations Guide (Doc. 7049).
2. Incorporate the SWE-8 into the system.
   a. In the *System Views*, right-click on the SWAMP-24X8 device and use the mouse to select **Add item to: "SWAMP-24X8"**.
   b. Double-click on **SWE-8**. The SWE-8 is added to the system as shown in the following diagram.

The system tree of the control system displays the device in the appropriate slot(s) with a default Net ID or IP ID as shown in the following illustration.

SWAMP-24X8 Device, Slots 8 and 9



3. Repeat step 2 for each SWE-8 to be added.

NOTE: If using Cresnet for communications between the SWAMP-24x8 and a control system, only one SWE-8 expansion switcher can be connected.

Program Manager

Program Manager is the view where programmers "program" a Crestron control system by assigning signals to symbols.

The symbol can be viewed by double clicking on the icon or dragging it into *Detail View*. Each signal in the symbol is described in the SIMPL Windows help file (**F1**).

Uploading and Upgrading

Crestron recommends using the latest programming software and that each device contains the latest firmware to take advantage of the most recently released features. However, before attempting to upload or upgrade it is necessary to establish communication.

Establishing Communication

All communication with the SWE-8 is managed through the communication link with a connected SWAMP-24X8. For information, refer to the latest version of the SWAMP(I)-24X8 Sonnex Multiroom Audio System Operations Guide (Doc. 7049).

Programs and Firmware

Any program or firmware updates are managed by the connection with the SWAMP-24X8. For information, refer to the latest version of the SWAMP(I)-24X8 Sonnex Multiroom Audio System Operations Guide (Doc. 7049).

Operation

The SWE-8 operates in either *Zone* mode or *Source* mode. The SWE-8's operating mode is determined by the operating mode of the SWAMP-24X8.

For information on operating the SWAMP-24X8, refer to the latest version of the SWAMP(I)-24X8 Sonnex Multiroom Audio System Operations Guide (Doc. 7049).

Zone Mode

Zone mode uses the SWAMP-24X8's front panel to route a source signal to a selected zone. To enter *Zone* mode:

1. Place the SWAMP-24X8 in *Zone* mode.
2. Press the **ZONE** button of the zone to be controlled.
3. Press the **SOURCE** button of the source to be routed. The associated **SOURCE** and **ZONE** LEDs light.

   Alternatively, press the **ZONE** button twice to turn on the zone and connect the last-selected source.

Source Mode

Source mode uses the SWAMP-24X8's front panel to select a source signal and route it to multiple zones. To enter *Source* mode:

1. Place the SWAMP-24X8 in *Source* mode.
2. On the SWAMP-24X8, press the **SOURCE** button of the source to be routed. The associated **SOURCE** LED lights.
3. On the SWE-8, press the **ZONE** buttons of the zones to be selected. The associated **ZONE** LED(s) lights.

   To remove a zone from a source, press the desired **ZONE** button. The associated **ZONE** LED turns off.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

SWE-8 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Audio dropouts heard on SWE-8 zone.	Bad shield or no shield on Sonnex cable connecting SWAMP-24X8 and peripheral device.	Ensure continuity and integrity of shield on both ends of the Sonnex cable.
Loss of functionality due to electrostatic discharge.	Improper grounding.	Check that all ground connections have been made properly.
Incorrect audio signal.	Signal is incorrectly routed.	Reroute the signal.
	Zone is incorrectly bussed with other zone(s).	Remove zone from bus.

Check Wiring

To ensure optimum performance over the full range of your installation topology, use Crestron Certified Wire. Failure to do so may incur additional charges if support is required to identify performance deficiencies because of using improper wire.

Reference Documents

The latest version of all documents mentioned within the guide can be obtained from the Crestron Web site (www.crestron.com/manuals).

List of Related Reference Documents

DOCUMENT TITLE
SWAMP(I)-24X8 Sonnex Multiroom Audio System

Further Inquiries

If you cannot locate specific information or have questions after reviewing this guide, please take advantage of Crestron's award winning customer service team by calling Crestron at 1-888-CRESTRON [1-888-273-7876]. For assistance in your region, please refer to the Crestron Web site (www.crestron.com/offices) for a listing of Crestron worldwide offices.

You can also log onto the online help section of the Crestron Web site (www.crestron.com/onlinehelp) to ask questions about Crestron products. First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features and extends the capabilities of the SWE-8, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron Web site periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

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